NATURAL RESOURCES

Reducing Waste In The Home Environment

Grade Level : 8

Subjects:
Science 2.3, 2.4, 4.2, 5.1
Math 5.5, 6.5

Time:
two class periods

Setting:
classroom, home

Materials:
Home Survey Worksheet, set of pictures included with this activity, markers, poster board

Skills:
collecting and interpreting data, communicating data on graphs

Vocabulary:
natural resource
hazardous waste

Source:
Watauga County Recycling Curriculum Committee

Summary: This activity involves students in a discussion of the use of natural resources in the home. Students will conduct a home survey to evaluate energy and water use, and solid waste and hazardous waste disposal by their families.

Objective: Students will define natural resources, identify their origins, collect data in a survey, and communicate the results in a graph. Students will also devise strategies to use natural resources more efficiently.

Background: If the Earth were only a few feet in diameter, floating a few feet above a field somewhere, people would come from everywhere to marvel at it. People would walk around it, marvelling at its big pools of water, its little pools and the water flowing between the pools. People would marvel at the bumps on it, and the holes in it, and they would marvel at the very thin layer of gas surrounding it and the water suspended in the gas. The people would marvel at all the creatures walking around the surface of the ball and at the creatures in the water. The people would declare it as sacred because it was the only one, and they would protect it so that it would not be hurt. The ball would be the greatest wonder known, and people would come to pray to it, to be healed, to gain knowledge, to know beauty and to wonder how it could be. People would love it and defend it because they would somehow know that their lives, their own roundness, could be nothing without it. If the Earth were only a few feet in diameter.

-Friends of the Earth, New Zealand

Leading Question: How can we identify and reduce the use of our natural resources at home?

Procedure:

1. Display pictures of a light bulb, water, and automobile.
   -What natural resources are represented by the pictures?
   -What is the source of each natural resource?
   -What is the environmental impact of using each resource?

2. Distribute home survey sheet to students, and direct them to complete these.

3. Encourage students to involve family members in this activity.

4. Discuss the results of the survey, then construct graphs plotting the class data.

5. Our population is increasing at an alarming rate. In 1818, the population was 1 billion. In the next 100 years, that number had doubled. By 1974, the population had doubled again to 4 billion.

Reducing Waste In The Home Environment (continued)

At this rate, it will double again in only 39 years. Assuming your class is growing at the same rate, complete the following activities:

a. How many students are there in your class?
b. What would the population of your class be by the year 2029 if it grows at 1.8% annually? (Multiply class size by 1.018, 39 times)
c. Discuss how population growth can have an impact on the environment.

What Now?

1. Read and report on the book *SILENT SPRING* by Rachel Carson.
2. Interview senior citizens about each issue area. (Energy, water, recycling, and toxins) Report your findings to the class.
3. Compile information on how natural resources are being used and depleted in the world.

Home Survey Worksheet

Find the following information about your family's use of natural resources.

1. How many gallons of gasoline does your family use per week?

2. How many miles does your family drive in a typical week?

3. Calculate the number of miles per gallon your automobile burns.

4. How much does your family pay for a gallon of gas?

5. Calculate the cost of gas per week, per month, and per year.

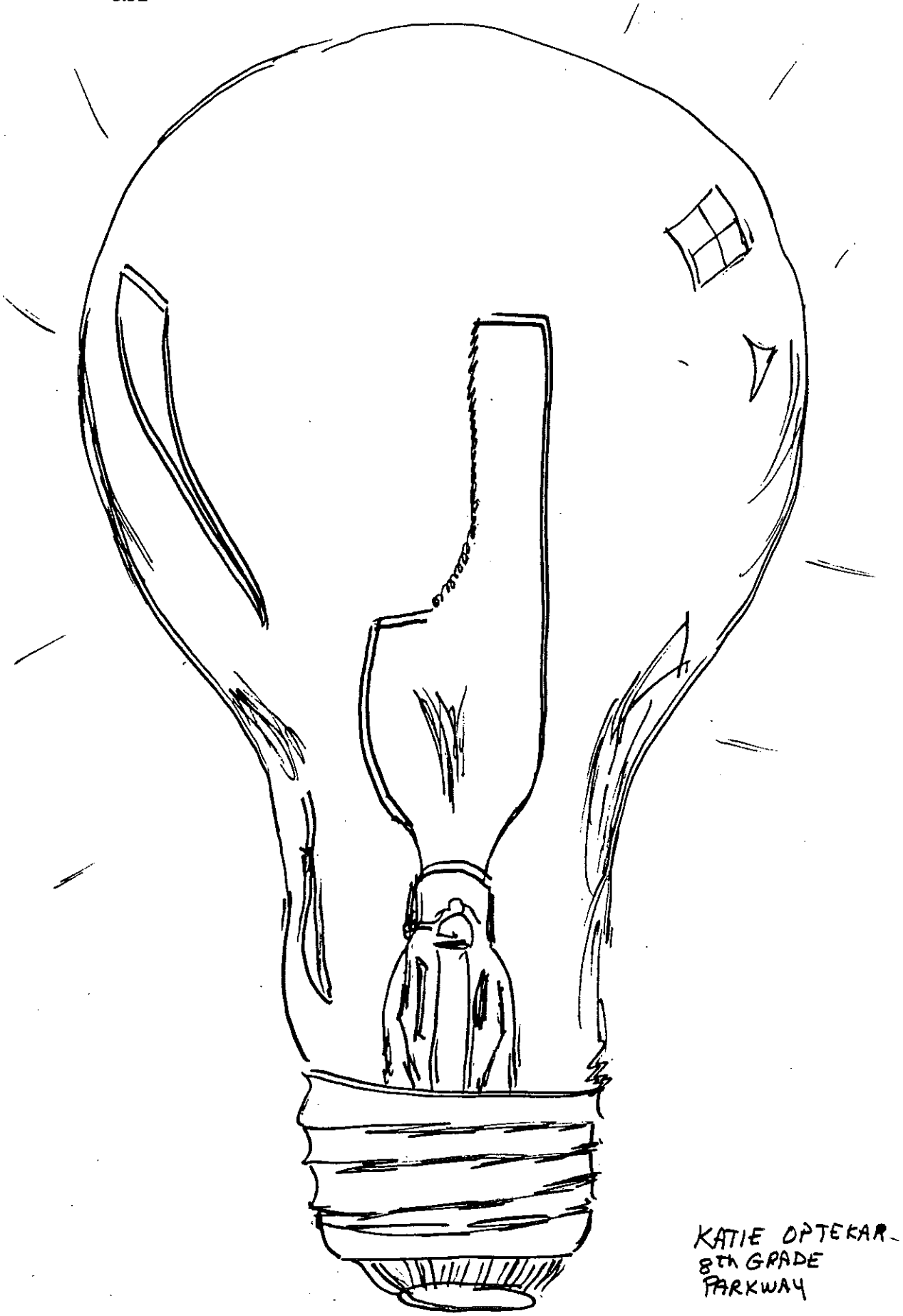
6. How much does your power company charge per kilowatt hour?

7. Examine your cabinets where cleansers and medicines are kept. Make a list of potentially hazardous materials you find there.

8. List the items your family recycles each week. Estimate the amount of each material.

9. Look for items you throw away that could be recycled. List these.

10. Plan a strategy to help your family save enough money to go on a vacation from energy conservation and recycling.



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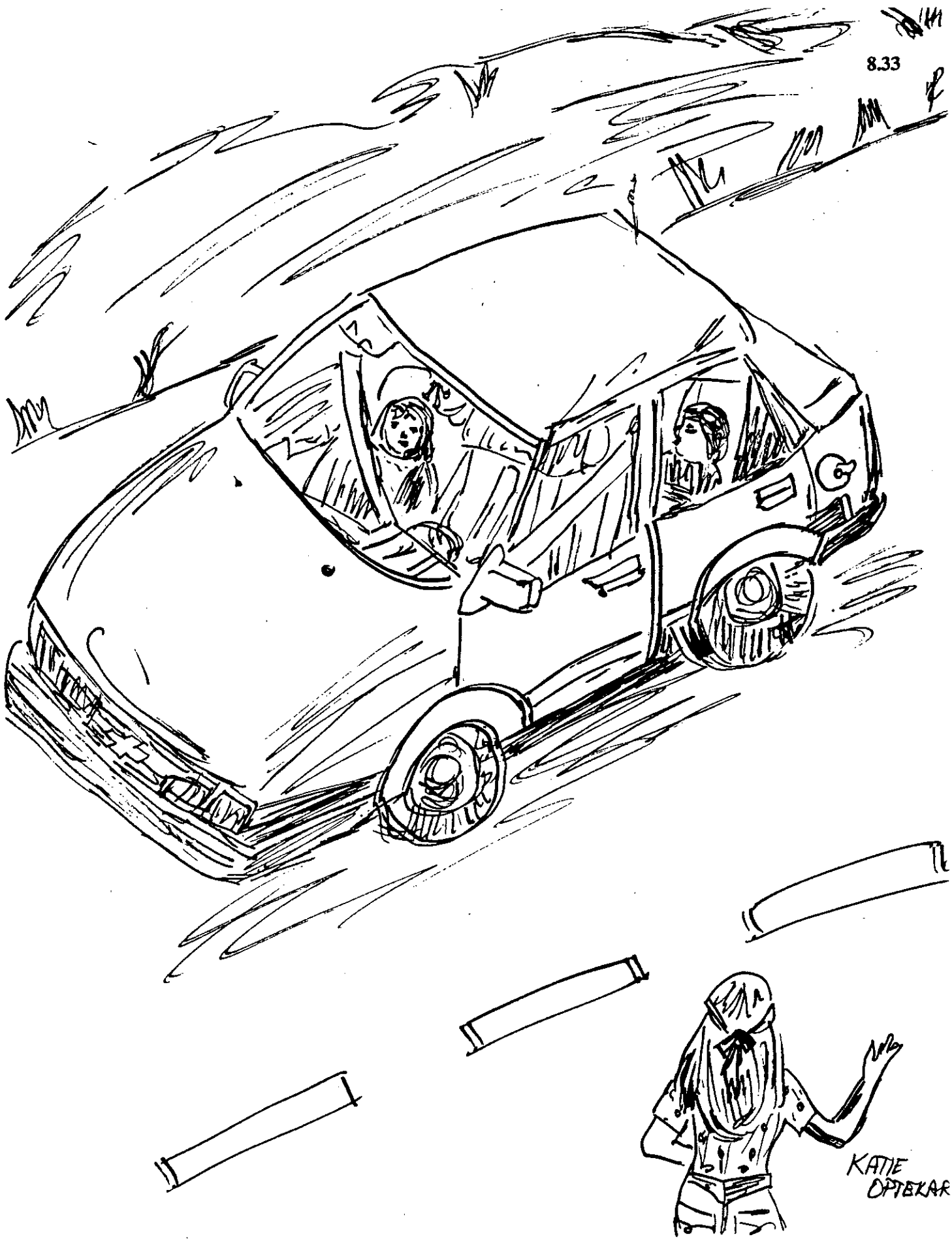

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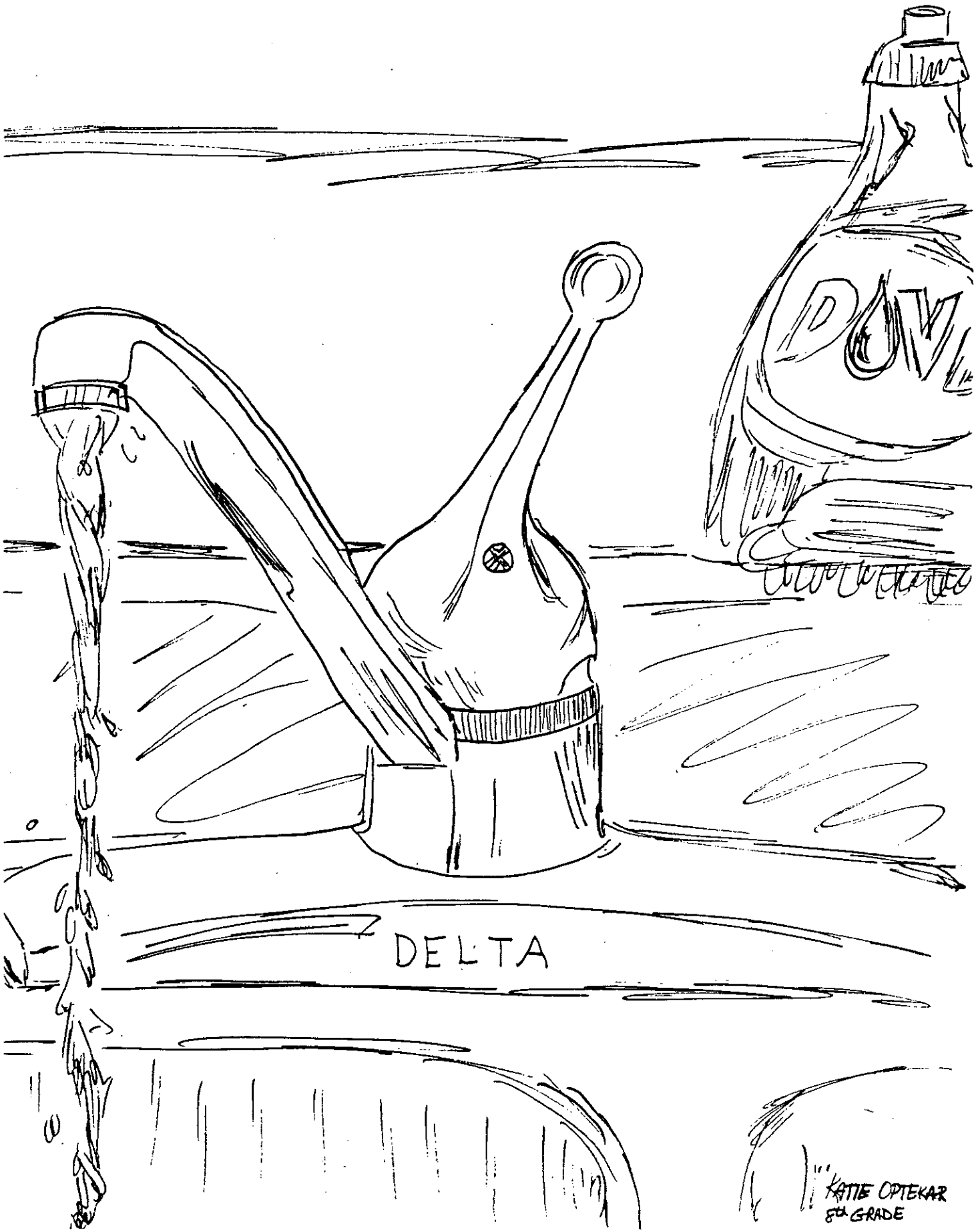
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